

sociated with said first image display surface to shift said surface into the normal image-receiving plane of said second surface when said second surface is moved out of its normal position to provide access to the focusing means of said projector.

7. Reader apparatus as defined in claim 6 characterized in that said first image display surface is spring-biased toward a stop position flush with the normal plane of said second image display surface whereby movement of said second display surface to a position giving access to the projector-focusing adjustment allows said first display surface to move automatically into position and enabling the user to focus the image accurately thereon.

8. Reader apparatus as defined in claim 6 characterized in that the return movement of said second display surface to the normal position is effective to shift said first display surface to the retraction position thereof.

9. Reader apparatus as defined in claim 6 characterized in the provision of manually adjustable means for adjusting the focusing position of said first display surface to lie flush with the normal operation of said second display surface thereby assuring that proper focusing of the projector on said first display surface will also be correct for said second display surface.

10. Reader apparatus as defined in claim 1 characterized in the provision of means supporting said projector for rotary movement about its projection axis.

11. Reader apparatus as defined in claim 10 characterized in the provision of control means conveniently positioned for use by the viewer to rotate the projector about its axis to orient the image in any desired position on said image display surface.

12. Reader apparatus as defined in claim 9 characterized in the provision of control means for rotating said projector in either direction about the axis thereof.

13. Reader apparatus as defined in claim 1 characterized in that said means for shifting the reflected image includes means for shifting the position of said image reflector means over a range of different positions.

14. Reader apparatus as defined in claim 13 characterized in the provision of means for anchoring said image reflector means in a desired adjusted position.

15. Reader apparatus as defined in claim 14 characterized in that said anchoring means includes means for supporting said image reflector means at different focal distances from said projector to vary the size of the projected image.

16. Reader apparatus as defined in claim 14 characterized in that said anchoring means includes means moving said image reflector means in a manner to shift the image closer to and away from the viewer for convenience in viewing a selected area of the image.

17. Reader apparatus as defined in claim 1 characterized in the provision of manually actuated control means for shifting

the image transversely of the viewer to facilitate reading the portion of the image previously pierced by the projection light beam.

18. Reader apparatus as defined in claim 1 characterized in the provision of means concealing said projector from view behind said image display surface.

19. Reader apparatus as defined in claim 1 characterized in that said image display surface includes a transparent disc coaxially of the projector axis and through which the film image is projected and onto said display surface surrounding and generally coplanar with said transparent disk.

20. In combination, microfilm apparatus having a counter supported generally horizontally at a convenient working height for a seated viewer, a shroud supported above said counter and closed except across the front side thereof, microfilm projector means concealed below said counter with its projection axis passing upwardly through light-transmitting means generally centrally of an image-receiving surface on the upper face of said counter, and means including reflector means supported beneath the top side of said shroud positioned to reflect the image from the projector on said counter in the area surrounding the image-projecting light beam and for shifting the image on said image-receiving surface as necessary for reading all portions thereof.

21. The combination defined in claim 20 characterized in that said projector includes reversible motor-driven means for moving strip film crosswise of the projection path of said projector, and single control means for said motor operable to control the direction and speed of said motor depending upon the direction and magnitude of movement of said control means from the deenergized null position thereof.

22. Microfilm reader apparatus comprising a unitary projector assembly for strip film, means providing an image display surface in the path of the light beam of said projector, said image display surface having a window barely large enough to pass the projector light beam, adjustable light-reflecting means positioned in the path of the light beam after passing through said window and effective to reflect the same onto different areas of said display surface all of which surround said window, and means rotatably supporting said projector about the axis of the light beam emanating therefrom and effective to orient the image in a proper viewing position on said display surface.

23. Reader apparatus as defined in claim 22 characterized in that said rotatable support includes antifriction bearing means, and said projector having nesting support in said bearing means and normally separable therefrom by lifting the same out of nested assembly therewithin.

24. Reader apparatus as defined in claim 23 characterized in that said image display surface means is positioned closely adjacent said projector and transversely of the image-projecting beam emanating therefrom.

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